

Amendments to the Claims

This listing of claims will replace the originally filed claims in the application.

Listing of Claims:

Claims 1 – 10 (cancelled)

Claim 11 (currently amended): A method for separating air by cryogenic distillation in an installation comprising a medium-pressure column, a low-pressure column and a mixing column in which:

- a) air is compressed in a compressor, cooled in a heat exchange line and a first portion of the air is sent to the vessel of the mixing column;
- b) a second portion of the air is sent to the medium-pressure column where it is separated the second portion of the air is boosted in a booster, cooled in the heat exchange line, and divided into a first fraction and a second fraction;
- c) the first fraction of the air is cooled in the heat exchange line, at least partially liquefied, and sent to the medium-pressure column and/or the low-pressure column;
- d) the second fraction of the air is expanded in a Claude turbine and sent to the medium-pressure column
- e) e) an oxygen-enriched liquid and a nitrogen-enriched liquid are sent from the medium-pressure column to the low-pressure column;
- f) f) an oxygen-enriched liquid is sent from the low-pressure column to the top of the mixing column;
- g) g) at least one flow of liquid is drawn off from the medium or low-pressure column; and
- f) f) the second portion of the air is boosted in a booster, cooled in the heat exchange line, and divided into a first fraction and a second fraction;
- g) g) the first fraction of the air is cooled in the heat exchange line, at least partially liquefied, and sent to the medium-pressure column and/or the low-pressure column;
- h) h) the second fraction of the air is expanded in a Claude turbine and sent to the medium-pressure column; and
- i) h) an oxygen-rich flow is drawn off from the mixing column and heated in the heat exchange line.

Claim 12 (previously presented): The method of claim 11, in which the liquid drawn off from the medium or low-pressure column is an end product.

Claim 13 (previously presented): The method of claim 11, in which the booster is coupled to the Claude turbine.

Claim 14 (previously presented): The method of claim 11, in which the booster is a cold booster.

Claim 15 (previously presented): The method of claim 11, in which the mixing column operates at between 8 and 20 bar abs.

Claim 16 (previously presented): The method of claim 11, in which all the air sent for distillation is compressed to between 8 and 20 bar abs.

Claim 17 (previously presented): The method of claim 11, in which between 40 and 90% of the air sent for distillation is boosted.

Claim 18 (previously presented): The method of claim 11, in which the boosted air is boosted to between 12 and 30 bar abs.

Claim 19 (previously presented): An installation for separating air by cryogenic distillation in an apparatus comprising a medium-pressure column, a low-pressure column and a mixing column, a Claude turbine, a booster, means for compressing air, means for sending a portion of the compressed air of the air to the mixing column, means for sending another portion of the compressed air to the booster, means for sending a fraction of the boosted air to the Claude turbine and for sending the expanded air to the medium-pressure column, means for sending the rest of the boosted air to the medium pressure and/or low-pressure column after liquefaction and expansion, and means for drawing off at least one liquid from the medium-pressure column and/or the low-pressure column as end product.

Claim 20 (previously presented): The installation of claim 19, in which the booster is coupled to the Claude turbine.